

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

QZ5076
.A1454
reserve



University of California
Department of
Agriculture
Library

University of California
Library for
Agriculture
Number 20

Vol 115

Practical Aquaculture Literature

A Bibliography



Practical Aquaculture Literature

A Bibliography

Compiled by
Bille Hougart, USDA Aquaculture Coordinator
James E. Miller, Extension Service, NR&RD Unit
Wallace C. Olsen, Formerly with the National Agricultural Library

In Cooperation With
Fish & Wildlife Service, U.S. Department of the Interior
National Sea Grant College Program, U.S. Department of
Commerce

Bibliographies and Literature
of Agriculture Number 35

United States Department of Agriculture
National Agricultural Library
Beltsville, Maryland 20705

August 1985

Table of Contents

Preface

	Page
Publications With Practical Applications	5
Aquaculture Planning and Economics	5
Bait	8
Brine Shrimp and Daphnia	9
Catfish	9
—Budgeting and Finance	12
—Processing and Marketing	13
Clams and Oysters	14
Crawfish	14
Diseases, Parasites and Predators	15
Eels and Frogs	18
Handling, Processing and Transportation	19
Ponds	20
—Construction and Maintenance	20
—Water Quality and Management	22
—Aquatic Vegetation Control	24
Salmon	24
Shrimp and Prawns	25
Sportfish	26
Trout	27
“How-To” Periodicals and Newsletters	29
Related Bibliographies	32
Cooperative Extension and Marine Advisory Contacts	34
Fish and Wildlife, USDI Extension Coordinators and Cooperators	41

Preface

The purpose of this bibliography is to provide a source of information for those interested in the application of available knowledge to aquaculture, or fish farming, and fisheries management. The intended audiences include aquaculturists, fish farmers, extension educators, and other involved in technology transfer, technical and financial assistance personnel, and private groups anticipating aquaculture enterprises. The listing was compiled from citations or documents provided by, and available from State and Federal agencies.

It is intended that this bibliography will alert aquaculturists, fish farmers, planners, and implementation agents to the availability of existing literature which may be of value in locales other than those for which it was originally intended.

What is Included?

This publication is a list of “how-to” publications. The following requirements were followed:

- The document must be in print and easily available.
- Documents or citations had to be provided by the State or Federal contacts in order to be included.
- Only publications of governmental and university organizations are included.
- The primary subject focus is aquaculture production, marine or fresh-water, of interest to producers.
- Only separately published items are included; there are NO references to journal articles, conference papers, or scientific workshops.

What is not included?

- Some valuable references may be available but excluded from this publication if they were not provided by State or Federal contacts.
- Some State and Federal agencies may have additional written information available that would be helpful to those involved in aquaculture; for example, newsletters, fact sheets, budget documents, audiovisuals, and computer programs which are not included in this compilation.

A source of obtaining each publication is given. Solicitation from that source is recommended. Few libraries collect or store this type of publication.

Requests for citations or publications were sent by James E. Miller, Extension Service, USDA, to aquaculture or fisheries Extension specialists in the States. In like manner, Nancy Huang, National Sea Grant College Program, National Oceanic and Atmospheric Administration, USDC, contacted State representatives. Materials were also submitted by the Fish and Wildlife Service, USDA. We thank all contributors without whom there would not have been an authoritative listing.

In requesting these publications and citations, contributors were asked to submit a brief descriptive paragraph which provided an overview of the content. Those responsible for this compilation did not attempt to create such a descriptive overview for those citations submitted without an overview.

Publications With Practical Applications

Aquaculture Planning and Economics

A Compilation of Aquaculture Materials for the State of South Carolina, edited by M.A. Davidson. Charleston, S.C., South Carolina Sea Grant Consortium (SC-SG-TR-82-02), 1982. 61 pages. Free to State residents; \$1.00 to others. For copies write to Communications, South Carolina Sea Grant Consortium, 221 Fort Johnson Road, Charleston, S.C. 29412.

Presents aquaculture maps, laws, permits information, contacts, and related material for prospective South Carolina aquaculturists.

A Generalized Budget Simulation Model for Aquaculture, by Wade L. Griffin, C. M. Adams and L. A. Jensen, with seven additional persons from five different universities. College Station, Tex., Texas A&M Sea Grant College Program (TAMU-SG-83-202). 131 pages. \$5.00 a copy (\$3.75 when buying 20 copies or more). For copies write to Sea Grant College Program, Texas A&M University, College Station, Tex. 77843-4115.

Manual for a computerized aquaculture budget simulator system to aid potential investors.

A Guide for County Program Planning in Aquaculture-Fisheries Management, by George W. Lewis. Athens, Ga., Coop. Ext. Serv. P-P-1: Fish and Aquaculture, Univ. of Ga., March 1983. 20 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Analyzing a New Marine Business, by F. J. Smith. Corvallis, Ore., Ore. State Univ. Ext. Serv. and Ore. Sea Grant, Marine Advisory Program 43, Nov. 1976. 8 pages. Free copies are available from Extension Service, Oregon State University, Corvallis, Ore. 97331.

Presents ideas and procedures concentrating on economic and financial matters.

Aquaculture Economics Research Needs: Reports from a Workshop, edited by F. J. Smith and K. J. Roberts. Charleston, S.C., S.C. Sea Grant Consortium (SC-SG-TR-76-05), 1976. 43 pages. Free to State residents, \$1.00 to others. For copies write to Communications, South Carolina Sea Grant Consortium, 221 Fort Johnson Road, Charleston, S.C. 29412.

Includes 33 papers on planning, economics, management, regulations, policy studies, communication, and cooperation.

Farming for Fun and Profit: Aquaculture, by Linda Marek. Burlington, Vt., Univ. of Vermont, Ext. Serv. Brieflet 1333, 1982. 4 pages. Single copies are free from Extension Service, Publications Office, Morrill Hall, University of Vermont, Burlington, Vt. 05405.

Presents startup information for small-scale fish culture, including financing, costs, and marketing pertinent to the Northeastern States.

Fish Farming in Vermont, by Linda Marek and G. W. LaBar. Burlington, Vt., Univ. of Vermont, Ext. Serv. and School of Nat. Res. (Brieflet 1307), 1980. 55 pages, illustrated. Single copies are free from the Extension Service, Publications Office, Morrill Hall, University of Vermont, Burlington, Vt. 05405.

A beginners guide, including information on species selection, production facilities, management, regulations, financing, equipment needs, and agency contacts.

Fish Farming Research, by E. W. Shell. Auburn Univ., Agr. Exp. Sta., 1983. 103 pages. Available at \$4.00 from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Fishery Cooperatives, by Norman Bender and Robert Beiter. Storrs, Conn., Univ. of Conn., Coop. Ext. Serv., Marine Advisory Service Fact Sheet, 1979. 3 pages. Free copies are available from Sea Grant/Extension Program, University of Connecticut, Avery Point, Groton, Conn. 06340.

Forming a Fisheries Association, by L. Garoyan and S. Taylor. Berkeley, Calif., Univ. of Calif., Coop. Ext. Serv., Bulletin (21210), Nov. 1980. 6 pages. Free copies are available from Cooperative Extension, University of California, Davis, Calif. 95616.

Home-Grown Fish From Cages, by John Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-269, Aug. 1981. 4 pages. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

Contains information on construction, stocking, and management of cages for channel catfish and rainbow trout.

Introduction to Shellfish Aquaculture in the Puget Sound Region, by Charles Magoon and R. Vining. Olympia, Wash., Wash. State Dept. of Nat. Res., 1981. 68 pages. \$5.00, from Washington Sea Grant Communications HG-30, 3716 Brooklyn Ave., N.E., Seattle, Wash. 98105.

Discusses the life histories and culture methods of oysters, clams, scallops, and abalone.

New, Developing, or High-Risk Aquaculture Enterprises, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., County Agent's Fisheries Update No. 5, Feb., 1983. 9 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Obtaining Financial Assistance for Commercial Fishing, Charter and Boat Operations, by Norman K. Bender. Storrs, Conn., Univ. of Conn., Coop. Ext. Serv., Marine Advisory Service, 1982. 24 pages. Free copies are available from Sea Grant/Extension Program, University of Connecticut, Avery Point, Groton, Conn. 06340.

Reports on public and private assistance, loans, credit, and loan application preparation.

Organizing and Operating a Fishery Cooperative: Part I, by F. J. Smith. Corvallis, Ore., Ore. State Univ., Ext. Serv. and Ore. Sea Grant Marine Advisory Program 19, undated. 4 pages. Free copies are available from Extension Service, Oregon State University, Corvallis, Ore. 97331.

Provides information about cooperative organization, including management and legal instruments used in organizing and operating a cooperative.

Planning for Commercial Aquaculture, by Donald L. Garling and L. A. Helfrich. Blacksburg, Va. Polytechnic Inst. and St. Univ., Ext. Div. Publication MT12H, June 1979. 9 pages. Single copies are free from J. M. Gray, Extension Division Distribution Center, 112 Landsdowne Street, Blacksburg, Va. 24060.

Discusses planning, training, pilot testing, and commercial operations in a phased approach for the beginner.

Public Fishing on Private Ponds—A Source of Income, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., County Agent's Fisheries Update No. 6, March 1983. 9 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Raising Fish for Food in Minnesota Farm Ponds, by Meredith O. Murnyak and G. Pollard. St. Paul, Minn., U.S. Dept. of Agriculture, SCS, undated. 10 pages, well illustrated. Free copies are available from Soil Conservation Service, 200 Federal Bldg., U.S. Courthouse, 316 N. Robert St., St. Paul, Minn. 55101.

Regulations, Permits and Approvals Required for Backyard Aquaculture Operations in Hawaii, by Jeffrey W. Hunt and Bernadette M. Pang. Honolulu, Hawaii, Univ. of Hawaii, Sea Grant Col. Program, Misc. Brochure (UNIH-SEAGRANT-MB-820-1), April 1982. 5 pages with checklists. Available at 50¢ from Publications Program, University of Hawaii Sea Grant Program, 1000 Pope Road, Room 200, Honolulu, Hawaii 96822.

Second Report to the Fish Farmers; The Status of Warmwater Fish Farming and Progress in Fish Farming Research, edited by Fred P. Meyer, K. E. Sneed, and P. T. Eschmeyer. Wash., D.C., U.S. Dept. of Interior, Bureau of Sport Fisheries and Wildlife, Resource Publ. 113, June 1973. 123 pages. Limited copies available from Fish Farming Experimental Station, P.O. Box 860, Stuttgart, Ark. 72160.

Third Report to the Fish Farmer; The Status of Warmwater Fish Farming and Progress in Fish Farming Research, edited by Harry K. Dupree and J. V. Huner. Wash., D.C., U.S. Dept. of Interior, Fish and Wildlife Service, 1984. 270 pages. Limited copies available from the Fish Farming Experimental Station, P.O. Box 860, Stuttgart, Ark. 72160.

Southern Aquaculture Directory: State and Federal Agencies Which Provide Assistance, by George W. Lewis and J. W. Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Aug. 1982. 15 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849, or from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Tax Management for Commercial Fishermen, by Norman K. Bender. Storrs, Conn., Univ. of Conn., Coop. Ext. Serv., Marine Advisory Service, 1981. 22 pages. Free copies are available from Sea Grant/Extension Program, University of Connecticut, Avery Point, Groton, Conn. 06340.

Main topics are record-keeping, and Federal and State tax laws.

Warmwater Aquaculture: Annual Report for 1982 for the Southern Regional Cooperative Research Project S-168, edited by Robert R. Stickney. Auburn Univ., Agr. Exp. Sta., 1983. 37 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Bait

Maintaining Minnows: A Guide for Retailers, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., B-1365, June 1981. 19 pages. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Includes information on water quality, use of antibiotics, hauling, handling, and resale of bait fish.

Manual for Bait Fish Culture in the South, by John J. Giudice, D. L. Gray, and J. M. Martin. Fayetteville, Ark., Univ. of Ark., Coop. Ext. Serv. and the U.S. Fish and Wildlife Serv. (EC550), undated. 49 pages. Free copies are available from Publications, Cooperative Extension Service, University of Arkansas, Little Rock, Ark. 72203.

The Marine Natural Bait Industry: Proceedings of a Workshop, edited by S. M. Muniak and R. J. Rhodes. Charleston, S.C., S. C. Sea Grant Consortium (SC-SG-PR-82-01), 1982. Free to State residents, \$1.00 to others. For copies write to Communications, South Carolina Sea Grant Consortium, 221 Fort Johnson Road, Charleston, S.C. 29412.

Documents the extent of the bait industry and provides information on its problems and opportunities.

Raising Crickets for Fish Bait, by James T. Davis. College Sta., Tex. Agr. Ext. Serv., L-1311, July 1977. 3-page fact sheet. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Explains facilities required and discusses marketing problems.

Raising Fishworms for Bait, by Charles W. Ramsey and J. T. Davis. College Sta., Tex., Agr. Ext. Serv., L-1310, May 1976. 4-page fact sheet. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Worm production for bait or as a supplemental food source for fish.

Raising Minnows, by S. Ken Johnson and J. T. Davis. College Sta., Tex., Agr. Ext. Serv., B-1311, March 1981. 15 pages, well illustrated. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Beginning manual on bait production. Includes common problems and presents solutions.

Brine Shrimp and Daphnia

Controlled Large-Scale Hatching of Brine Shrimp, Artemia Salina, by J. W. Meade, P. B. Haines, R. G. Howey, and G. L. Theis. Lamar, Pa., U.S. Fish and Wildlife Serv., Fish Cult. Dev. Ctr., Inf. Leaflet No. 80-03, 1980. 9 pages. Free copies are available from Lamar National Fish Hatchery and Development Center, P.O. Box 75, Lamar, Pa. 16848.

Culturing, Harvesting, and Grading Daphnia, by R. G. Hovey and P. B. Haines, Lamar, Pa., U.S. Fish and Wildlife Serv., Fish Cult. Dev. Ctr., Inf. Leaflet No. 80-04, 1980. 11 pages. Free copies are available from Lamar National Fish Hatchery and Development Center, P.O. Box 75, Lamar, Pa. 16848.

Catfish

Anatomy and Histology of the Channel Catfish, by J. M. Grizzle and W. A. Rogers. Auburn Univ., Agr. Exp. Sta., 1976. 94 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

A Records System for Catfish Production Management Decision-Making for These Microcomputers: Radio Shack Model III, Radio Shack Model II, Radio Shack Model 16, IBM Personal Computer, by Lee Fouche. Miss. St., Dept. of Agr. Econ., Miss. St. Agr. and Forestry Exp. Sta., Agricultural Economics Technical Pub. No. 43, 1983. 106 pages. Available from Department of Agricultural Economics, P.O. Box 5187, Mississippi State University, Mississippi State, Miss. 39762.

Catfish Cage Culture in Farm Ponds, by D. Leroy Gray and S. Newton. Little Rock, Ark., Univ. of Ark. Div. of Agr., Univ. of Ark. at Pine Bluff, Coop. Ext. Serv., U.S. Dept. of Agriculture and county governments cooperating, Extension Leaflet 659, August 1983. 4-page pamphlet, illustrated. Free copies are available from Cooperative Extension Service, University of Arkansas, Little Rock, Ark. 72203

Information on the culture of catfish in cages, including stocking, feeding, disease treatment, and cage construction.

Catfish Farming, by R. W. (Bill) Altman. Stillwater, Okla., Oklahoma St. Univ., Extension Fact No. 9002, undated, 2-page flyer. Free copies are available from Central Mailing Service, Publications and Printing, Oklahoma State University, Stillwater, Okla. 74078.

Catfish Farming, U.S. Dept. of Agriculture, Wash., D.C., Farmers' Bulletin No. 2260, Dec. 1981. 29 pages. Free copies are available from county or state Soil Conservation Service offices, or Publications Office, Soil Conservation Service, Washington, D.C. 20250.

Catfish Farming in Cages in Virginia's Ponds and Lakes, by L. A. Helfrich, J. C. Dean, D. L. Garling, and D. L. Weigmann. Blacksburg, Va., Va. Polytechnic Inst. and St. Univ., Ext. Div. Publ. 420-918, Oct. 1981. 13 pages. Single copies are free from J. M. Gray, Extension Division Distribution Center, 112 Landdowne Street, Blacksburg, Va. 24060.

Presents information on cage construction, stocking densities, growing seasons, transportation and handling, feeds and feeding, and other management concerns.

Catfish Farming—Is It For You?, by John Jensen and J. R. Crews. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-273, July 1981. 2-page brochure. Free copies are available from Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

Asks questions all prospective catfish producers should answer before investing.

A Catfish Growth Simulation Model: For Use With TRS-80 Models II, III, 16, and IBM PC Microcomputers, by R. Hickel, W. E. Killcreas, and J. E. Waldrop. Miss. St., Dept. of Agr. Econ., Miss. St. Agr. and Forestry Exp. Sta., Agricultural Economics Technical Pub. No. 42, Jan. 1983. 11 pages. Available from Department of Agricultural Economics, P.O. Box 5187, Mississippi State University, Mississippi State, Miss. 39762.

The program is designed to allow for specific situations. The source input information is the users experience on his farm including his records, and/or from experts on the growth of catfish.

Catfish in Farm Ponds for Food and Recreation, by Joe T. Lock and D. Steinbach. College Sta., Tex., Agr. Ext. Serv., B-1319, Nov. 1981. 10 pages in color. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Management of catfish in small farm ponds for additional profit.

Channel Catfish Farming in Louisiana, by James T. Davis and J. S. Hughes. Baton, Rouge, La., La. Wildlife and Fisheries Commission, Wildlife Education Bulletin No. 98, 1977. 47 pages, illustrated. Free copies are available from Louisiana Wildlife and Fisheries Commission, Capitol Station, Baton Rouge, La. 70804.

Covers pond construction, management, stocking, feeding, mortality, harvesting, and marketing.

Channel Catfish Virus Disease, by John A. Plumb. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., Natl. Fish Health Res. Lab., Fish Disease Leaflet-52, 1977. 8 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Channel Catfish Production in Ponds, by John Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-195, Jan. 1981. 15 pages, illustrated. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

General guide for prospective catfish farmers, includes material on stocking rates, feeding, water quality, aeration, diseases, harvesting, transportation, and marketing.

Checklist for Prospective Catfish Farmers, by James T. Davis. College Sta., Tex., Agr. Ext. Serv., undated. 6 typed pages. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Lists questions prospective catfish farmers should answer before beginning operations. Includes cost projections.

Corral Seine for Trapping Catfish, by John Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-257, undated. 3-page fact sheet. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

Discusses fish trapping from ponds without draining water and mesh size selection for catching fish.

Genetics and Breeding of Channel Catfish, edited by R. O. Smitherman, H. M. El-Ibiary and R. E. Reagan. Auburn Univ., Southern Coop. Agr. Res. Bulletin 223, Oct. 1978. 34 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Homegrown Catfish, by George Lewis. Athens, Ga., Coop. Ext. Serv., Bulletin 881, Univ. of Ga., Oct. 1982. 15 pages, illustrated. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Nutrition and Feeding of Channel Catfish; A Report from the Nutrition Subcommittee of Regional Research Project S-83, edited by R. R. Stickney and R. T. Lovell. Contributions from J. W. Anderson, H. K. Dupree, R. T. Lovell, H. R. Robinette, R. R. Stickney and P. P. Wilson. Auburn Univ., Southern Coop. Agr. Res. Bulletin 218, Oct. 1977. 66 pages, well illustrated and with a 6-page bibliography. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Producing Channel Catfish Fingerlings, by John Jensen, R. Dunham and J. Flynn. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-327, Jan. 1983. 22 pages. Free copies are available from Ala. Coop. Ext. Service, Auburn University, Auburn, Ala. 36849.

Topics include brook stock selection, sex determination, general care and management, plus hatchery design and fry and fingerling production management.

The Biology of Channel Catfish Production, by D. Leroy Gray. Little Rock, Ark., Coop. Ext. Serv., Univ. of Ark., Div. of Agr., USDA cooperating, Extension Circular No. 535, April 1982. 14 pages, illustrated. Free copies are available from Cooperative Extension Service, University of Arkansas, Little Rock, Ark. 72203.

Primer on production, including pond construction, spawning techniques, stocking and feeding, and diseases.

**Cattfish—
Budgeting and Finance**

Budgeting for Georgia Catfish Production. Athens, Ga., Coop. Ext. Serv., County Agent's Fisheries Update No. 9, College of Agr., April 1983. 37 pages, primarily economics tables. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Cost Size Relationships in the Production of Pond-Raised Catfish for Food, by Thomas H. Foster and J. E. Waldrop. Miss. St. Univ., Miss. Agr. and For. Exp. Sta., Bulletin 792, Jan. 1972. Free copies are available from Cooperative Extension Service, Mississippi State University, Mississippi State, Miss. 39762.

An Economic Analysis of Producing Pond-Raised Catfish for Food in Mississippi, A January 1980 Update, by John E. Waldrop and R. D. Smith. Miss. St. Univ., Miss. Agr. and For. Exp. Sta., AEC103, July 1980. Free copies are available from Cooperative Extension Service, Mississippi State University, Mississippi State, Miss. 39762.

Effect of Production and Credit Management Factors on Catfish Investment and Profitability, by J. B. Flynn, N. R. Martin, Jr., and G. D. Hanson. Auburn Univ., Agr. Exp. Sta., Bulletin No. 548, June 1983. 27 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Mississippi Farm-Raised Catfish: January 1982 Cost of Production Estimates, by Jeffrey W. Giachelli, R. E. Coats, and J. E. Waldrop. Miss. St. Univ., Miss. Agr. and For. Exp. Sta., Agricultural Economics Research Report No. 134, June 1982. 41 pages. Free copies are available from Cooperative Extension Service, Mississippi State University, Mississippi State, Miss. 39652.

Preparation of Financial Budget for Fish Production: Catfish Production in Areas with Level Land and Adequate Ground Water, by W. W. McCoy and J. L. Boutwell. Auburn Univ., Agr. Exp. Sta., Circular 233, March 1977. 48 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

*Catfish—
Processing
and Marketing*

Design of Small-Scale Catfish Processing Plants in Alabama, by R. T. Lovell, W. G. Mustin, and J. W. Jensen. Auburn Univ., Agr. Exp. Sta., Circular 255, June 1981. 12 pages with illustrations. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Construction, operation, and health regulations for small processing plant in Alabama.

Processing Farm-Raised Catfish, by R. T. Lovell and G. R. Ammerman. Auburn Univ., Southern Coop. Agr. Res. Bulletin No. 193, Oct. 1974. 59 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Survey of Commercial Catfish Processors—Structural and Operational Characteristics and Procurement and Marketing Practices, by J. S. Miller, J. R. Conner, and J. E. Waldrop. Miss. St. Univ., Miss. Agr. and For. Exp. Sta., Agricultural Economics Research Report No. 132, Oct. 1981. Free copies are available from Cooperative Extension Service, Mississippi State University, Mississippi State, Miss. 39652.

Survey of Market Channels for Farm-Raised Catfish, by D. A. Dixon, Jr., J. S. Miller, J. R. Conner, and J. E. Waldrop. Miss. St. Univ., Miss. Agr. and For. Exp. Sta., Agricultural Economics Research Report No. 132, March 1982. Free copies are available from Cooperative Extension Service, Mississippi State University, Mississippi State, Miss. 39762.

Utilization of Catfish Processing Waste, by R. T. Lovell. Auburn Univ., Agr. Exp. Sta., Bulletin 521, Oct. 1980. 19 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

*Weight Loss of Pond-Raised Channel Catfish (*Ictalurus punctatus*) During Holding in Processing Plant Vats*, by Donald G. Greenland and R. L. Gill. Seattle, Wash., National Oceanic and Atmospheric Admin., National Marine Fisheries Serv., NOAA Technical Report NMFS SSRF-648, Dec. 1971. 7 pages. Available for 25¢ from Superintendent of Documents, GPO, Washington, D.C. 20402.

Clams and Oysters

A Guide to Manila Clam Aquaculture in Puget Sound, by Gregory J. Anderson, M. B. Miller, and K. K. Chew. Seattle, Wash., Univ. of Wash. Sea Grant Program (WSG 82-4), July 1982. 45 pages, illustrated. \$3.50 prepaid. For copies write to Washington Sea Grant Communications HG-30, 3716 Brooklyn Ave., N.E., Seattle, Wash. 98105.

Summarizes experimental clam plantings. Includes information on substrate, permits, planting techniques, handling, harvesting, and economic feasibility.

Breeding for Resistance to Summertime Mortality in the Pacific Oyster, by J. Hal Beattie, W. K. Hershberger, K. K. Chew, C. Mahnken, E. F. Prentice, and C. Jones. Seattle, Wash., Univ. of Wash. Sea Grant Program (WSG 78-3), July 1978. 13 pages. \$1.50 prepaid. For copies write to Washington Sea Grant Communications HG-30, 3716 Brooklyn Ave., N.E., Seattle, Wash. 98105.

Discusses mortalities related to stress caused by elevated temperatures.

Crawfish

Biology and Life History of Crawfish, by James T. Davis. College Sta., Tex., Agr. Ext. Serv., undated. 6 typed pages. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Presents information needed to make intelligent decisions about crawfish culture.

Crawfish Farming, by Cecil LaCaze. Baton Rouge, La., La. Wildlife and Fisheries Commission, Dept. of Wildlife and Fisheries, Fisheries Bulletin No. 7, 1981. 25 pages. Free copies are available from Louisiana Department of Wildlife and Fisheries, P.O. Box 44095, Capitol Station, Baton Rouge, La. 70804.

Crawfish culture methods in Louisiana, including biology, pond siting and construction, water and soil quality, and pond management.

Crawfish Production in Georgia. Athens, Ga., Coop. Ext. Serv., County Agent's Fisheries Update No. 3, College of Agr., Nov. 1982. 16 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Outlines crawfish potential in Georgia; includes information about growing requirements, costs, and returns.

Crawfish Production and Marketing Workshop Proceedings, Orange, Tex., Oct. 19, 1982, edited by James T. Davis. College Sta., Tex., Agr. Ext. Serv., 1983. 53 pages. Copies available for \$5.00 from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Guidelines for Crawfish Farming in South Carolina, by Noel C. Alon and J. M. Dean. Columbia, S.C., S.C. Sea Grant Consortium Special Publication (USC-BI-80-1 and SC-SG-TR-80-03), Dec. 1980. 71 pages. Free to State residents, \$1.00 to others. For copies write to Communications, South Carolina Sea Grant Consortium, 221 Fort Johnson Road, Charleston, S.C. 29412.

Louisiana Seafood Delight—The Crawfish, by Michael W. Moody. Baton Rouge, La., La. St. Univ., Coop. Ext. Serv. and La. Sea Grant College Program, Pub. LSU-TL-80-002, July 1982. 7 pages, illustrated. Free copies are available from Cooperative Extension Service, Louisiana State University, Baton Rouge, La. 70804.

Commercial and home handling and processing of crawfish.

Production Guidelines: Crawfish Production in Texas, by James T. Davis and E. D. Kachtik. College Sta., Tex., Agr. Ext. Serv., undated. 4 typed pages. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Includes information on crawfish biology, site selection, pond construction, production monitoring, and checklist for beginners.

Selecting Crawfish for Cooking, by James T. Davis and B. Rowland. College Sta., Tex., Agr. Ext. Serv., L-1877, Oct. 1981. 2 pages, illustrated. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Presents information for consumers to properly prepare crawfish.

Water Quality in Crawfish Farming, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab. (FDDL-S13), Feb. 1983. 9 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Discusses the water quality characteristics and their effect on pond culture of crawfish in Texas.

Diseases, Parasites and Predators

Anchor Parasites of Fishes, by Sterling K. Johnson. College Sta., Tex., Agr. Ext. Serv., L-1409, April 1978. 2-page fact sheet. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall Texas A&M University, College Station, Tex. 77843.

Discusses the effect on fishes and possible prevention and control through management.

Argulus, A Branchiuran Parasite of Freshwater Fishes, by G. L. Hoffman. Stuttgart, Ark., U.S. Fish and Wildlife Serv., Fish Farming Exp. Station, Fish Disease Leaflet No. 49, 1977. 9 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Control of Bird Damage at Aquaculture Facilities, by Terrell P. Salmon and F. S. Conte. Wash., D.C., U.S. Dept. of Interior, U.S. Fish and Wildlife Serv., Wildlife Management Leaflet No. 475, 1981. 13 pages, illustrated. Prepared with the Univ. of Calif. Coop. Ext. Free copies are available from Technical Information Center, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Control and Treatment of Parasitic Diseases of Freshwater Fishes, by Glenn L. Hoffman. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., Natl. Fish Health Res. Lab., Fish Disease Leaflet-28, 1980. 7 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Crawfish and Freshwater Shrimp Diseases, by S. K. Johnson. College Sta., Tex., Sea Grant College Program and Texas Agr. Ext. Serv., TAMU-SG-77-605, 1977. 19 pages, with color illustrations. Single copies are free from Dept. of Marine Resources Information, Texas A&M University, College Station, Tex. 77843

Information about abnormal conditions affecting freshwater crustaceans. Companion to *Handbook of Shrimp Diseases*.

Diseases and Parasites of Fishes: An Annotated Bibliography of Books and Symposia, 1904-1977, by Joyce A. Mann. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., Fish Health Res. Lab., Fish Disease Leaflet-53, 1978. 28 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Enteric Redmouth Disease of Salmonids, by G. L. Bullock and S. F. Snieszko. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., National Fish Health Res. Lab., Fish Disease Leaflet-57, 1979. 7 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Fish Grubs in Freshwater Ponds and Lakes, by Sterling K. Johnson. College Sta., Tex., Agr. Ext. Serv., MP-1237, Dec. 1975. 6 pages, illustrated. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Presents control methodology for yellow and black grubs in Texas.

Fish Kills in Indiana—Their Causes and Prevention, by Herbert C. Krauch. West Lafayette, Ind., Purdue Univ., Coop. Ext. Serv., Forestry and Natural Resources (FNR) 69, 1982. 2 pages. Free copies are available from Dept. of Forestry and Nat. Res., Purdue University, West Lafayette, Ind. 47907.

Discusses chemical and physical treatment, mostly for pond culture.

How to Diagnose and Handle Fish Kills and Disease, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., County Agent's Fisheries Update No. 1, College of Agr., Nov. 1979. 12 pages. Supplement 1 entitled Agricultural Pesticides and Fish Kills in 13 pages, half of which are tables. Issued in Dec. 1979. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Ich Disease of Fishes, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., L-1210, Jan. 1981. 4-page fact sheet. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Details the life history of this common parasite and makes recommendations for control and prevention.

Ich Disease of Tropical Fishes in Retailing Establishments, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab., (FDDL-F9), Jan. 1977. 5 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Provides various methods available to control Ich disease.

Important Tapeworms of North American Freshwater Fishes, by Andrew J. Mitchell and G. L. Hoffman. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., Natl. Fish Health Res. Lab., Fish Disease Leaflet-59, 1980. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Microbial Fish Disease Laboratory Manual, by John Plumb and P. R. Bowser. Auburn Univ., Agr. Exp. Sta., 1983. 95 pages. Available at \$2.50 from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Nutritional (dietary) Gill Disease and Other Less Known Gill Diseases of Freshwater Fishes, by S. F. Snieszko. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., Natl. Fish Health Res. Lab., Fish Disease Leaflet-36, 1974. 2 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Oral Administration of Antibiotics to Fishes, by Sterling K. Johnson. College Sta., Tex., Agr. Ext. Serv., L-1018, Sept. 1971. 2-page fact sheet. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Discusses available antibiotics, their application, and their use in feeds.

Snake Control Around Farm Ponds, by D. Leroy Gray. Little Rock, Ark., Coop. Ext. Serv., Univ. of Ark., Div. of Agr., USDA and county governments cooperating, Extension Leaflet No. 627, July 1981. 2-page pamphlet. Free copies are available from Cooperative Extension Service, University of Arkansas, Little Rock, Ark. 72203.

Contains helpful hints about the control of snakes in a farm pond.

Some Disease Problems in Crawfish and Freshwater Shrimp Culture, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab., (FDDL-S11), Feb. 1978. 5 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Presents causes of mortalities with a focus on environmental conditions.

Spring Viremia of Carp, by Winfred Ahne and K. Wolf. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., Natl. Fish Health Res. Lab., Fish Disease Leaflet-51, 1977. 11 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Streptococcal Infections of Fishes, by G. L. Bullock. Kearneysville, W. Va., U.S. Fish and Wildlife Serv., National Fish Health Res. Lab., Fish Disease Leaflet-63, 1981. 7 pages. Free copies are available from Technical Information Services, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Tet Disease of Tropical Fishes and an Evaluation of Correction Techniques, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab., (FDDL-F12), Feb. 1978. 7 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Discusses identification and control methods in the aquarium trade.

Turtle Control in Farm Ponds, by James T. Davis. College Sta., Tex., Agr. Ext. Serv., L-1440, May 1976. 4-page fact sheet. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Explains habits and life history of turtles and proposes control measures.

Eels and Frogs

Commercial Frog Farming, by L. A. Helfrich and D. L. Garling. Blacksburg, Va., Va. Polytechnic Inst. and St. Univ., Dept. of Fisheries and Wildlife Sciences, undated. 6 pages. Free copies are available from L. A. Helfrich, Fisheries Extension Specialist, 152 Cheatham Hall, Virginia Tech., Blacksburg, Va. 24061.

Reviews species, life cycles, feeding practices, pond design and construction, and economic factors in frog production.

Eel Farming—Are You Prepared?, Raleigh, N.C., Univ. of N.C., Sea Grant Blueprints (UNC-SG-BP-81-2), 1981. 4 pages, illustrated. Free copies are available from Sea Grant College Program, 105 1911 Bldg., North Carolina State University, Raleigh, N.C. 27650.

A Feeding Tray for Use in Eel Farming, by William L. Richards, J. E. Foster, and W. R. Jones. Raleigh, N.C., Univ. of N.C., Sea Grant Publication UNC-SG-78-04, April 1978. 11 pages, illustrated. Free copies are available from Sea Grant College Program, 105 1911 Bldg., North Carolina State University, Raleigh, N.C. 27650.

Handling, Processing and Transportation

Adapting Red Meat Plants for Fish Processing, by W. R. Jones, J. Donald, and J. Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-333, Aug. 1982. 2-page meats fact sheet. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

Distributing Fingerling Trout, Largemouth Bass and Blue-gills to Farm Pond Applicants via Parcel Post, by A. B. Blair. Lamar, Pa., U.S. Fish and Wildlife Serv., Fish Cult. Dev. Ctr., 1969. 12 mimeographed pages. Free copies are available from Lamar National Fish Hatchery and Development Center, P.O. Box 75, Lamar, Pa. 16848.

Freezing Fish and Shellfish, by Ranzell Nickelson and A. Reddell. College Sta., Tex., Agr. Ext. Serv., B-1242, Sept. 1980. Free copies are available from Extension, Wildlife and Fisheries, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

This manual presents guidelines for selection, handling, and freezing of seafood.

Now That You've Caught That Fish . . . What are You Going to do With It?, by Ranzell Nickelson and D. W. Steinbach. College Sta., Tex., Agr. Ext. Serv. and Sea Grant Program, TAMU-SG-76-501, May 1978. 4 pages, illustrated. Free copies are available from Sea Grant College Program, Texas A&M University, College Station, Tex. 77843.

Presents the do's and don'ts of fish handling, including storage, skinning, processing, and maintaining flavor.

Seafood Handling, Preservation and Marketing, edited by John B. Peters. Seattle, Wash., Univ. of Wash., Sea Grant Program, (WSG-WO 78-2), Jan. 1979. 78 pages, illustrated. \$3.00 prepaid. For copies write to Washington Sea Grant Communications HG-30, 3716 Brooklyn Ave., N.E., Seattle, Wash. 98105.

Includes papers on seafood marketing, handling systems, refrigeration systems, and techniques.

Seafood Quality Control: A Manual for Processing Plant Personnel, by Ranzell Nickelson and Manuel Pina. College Sta., Texas A&M Univ., Sea Grant Program and Tex. Agr. Ext. Serv., June 1973. (TAMU-SG-73-504) Marine Advisory Bulletin: Fisheries. 8 pages, in English and Spanish. Free copies are available from Center for Marine Resources, Texas A&M University, College Station, Tex. 77843.

Sportsman's Guide to Smoking Fish. Norris, Tenn., Tennessee Valley Authority, Div. of Forestry, Fisheries and Wildlife Development, and Univ. of Tenn., Food Technology and Science Dept., 1977. 6 pages, well illustrated. Free copies are available from Agricultural Extension Service, University of Tennessee Institute of Agriculture, P.O. Box 1071, Knoxville, Tenn. 37901.

Transport of Live Fish, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab., (FDDL-F14), March 1979. 13 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Discusses methods, equipment, requirements, limiting factors, and management.

Transportation of Salmonid Fishes, by C. E. Smith. Wash., D.C., U.S. Fish and Wildlife Serv., Natl. Fish Hatchery, 1978. 33 pages. Free copies are available from Information Center, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

Wet Transport of Fishes in Sealed Containers, by Sterling K. Johnson and C. Cichra. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab., (FDDL-F18), Feb. 1983. 7 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Ponds

Construction and Maintenance

Building Freshwater Fish Attractors, by George Lewis. Athens, Ga., Coop. Ext. Serv., Leaflet No. 251, Univ. of Ga., April 1982. 6-page leaflet. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Building a Pond, U.S. Dept. of Agriculture, Wash., D.C., Farmer's Bulletin No. 2256, Oct. 1973. 14 pages, illustrated. Free copies are available from county or state Soil Conservation Service offices, or Publications Office, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C. 20250.

Fish Pond Planning and Design in Minnesota, by Dennis Murynak and George Pollard. St. Paul, Minn., Soil Conservation Service, USDA, undated. Issued with the Wright Co. Community Action Program, Inc. and the Governor's Council on Rural Devel. 6 pages. Free copies are available from Soil Conservation Service, 200 Federal Bldg., U.S. Courthouse, 316 N. Robert St., St. Paul, Minn. 55101.

How to Renovate Your Pond, by J. Larry Wilson and R. P. Mullett. Knoxville, Tenn., Univ. of Tenn., Agr. Ext. Serv., (EC 801), July 1971. 6 pages, illustrated. Free copies are available from Agricultural Extension Service, University of Tennessee Institute of Agriculture, P.O. Box 1071, Knoxville, Tenn. 37901.

Improve Your Farm Fish Pond, by Joe Lock and W. Klussman. College Sta., Tex., Agr. Ext. Serv., B-213, Aug. 1981. 15 pages, illustrated. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Covers construction through fertilization and vegetation control.

Ponds—Planning, Design, Construction, U.S. Dept. of Agriculture, Wash., D.C., Agriculture Handbook No. 590, June 1982. 51 pages with color photo and line illustrations. Free copies are available from county or state Soil Conservation Service offices, or Publications Office, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C. 20250. Also available from Gov't. Printing Office, Washington, D.C. 20402, for \$5.00

Concerned with proper construction of multi-purpose ponds on agricultural land.

Renovation of Farm Ponds, by Billy Higginbotham and D. W. Steinbach. College Sta., Tex., Agr. Ext. Serv., L-2084, July 1983. 2-page fact sheet. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Explains techniques used in pond renovation including proper ways to remove unwanted fish populations.

Sealing Ponds with Bentonite, by C. Wayne Keese. College Sta., Tex., Agr. Ext. Serv., L-262, May 1981. 6-page leaflet. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Discusses ways to stop pond leakage and proper methods to use Bentonite.

Spillway Barriers for Farm Ponds, by John Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-326, Aug. 1982. 2 pages. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

Provides instructions and drawings on how to build and install a barrier to prevent fish from escaping farm ponds.

Warm-Water Fishponds, by Olan W. Dillon, Jr., W. M. Neely, V. E. Davidson, and L. V. Compton. U.S. Dept. of Agriculture, Wash., D.C., Farmers' Bulletin No. 2550, Dec. 1971. 14 pages, illustrated. Free copies are available from county or state Soil Conservation Service offices, or Publications Office, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C. 20250.

Pond siting, construction, erosion control, stocking, fertilization, and weed control.

*Ponds—
Water Quality and
Management*

Degassing Supersaturated Water for Fish Culture, by R. G. Howey and G. L. Theis. Lamar, Pa., U.S. Fish and Wildlife Service, Fish Cult. Dev. Ctr., Info. Leaflet No. 80-02, 1981. 8 pages. Free copies are available from Lamar National Fish Hatchery and Development Center, P.O. Box 75, Lamar, Pa. 16848.

Farm Pond Management, by D. Leroy Gray. Little Rock, Ark., Coop. Ext. Serv., Univ. of Ark., Div. of Agr., USDA cooperating, Extension Leaflet 248, undated. 2-page pamphlet. Free copies are available from Cooperative Extension Service, University of Arkansas, Little Rock, Ark. 72203

Suggestions on pond construction, stocking, fertilization, and aquatic vegetation control.

Fertilizing Fish Ponds, by John Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-249, May 1981. 3-page fisheries fact sheet. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

Why, when and how to fertilize fish ponds, and use of liquid fertilizer in fish ponds.

How to Use Rotenone, by Thomas K. Hill. Knoxville, Tenn., Univ. of Tenn., Agr. Ext. Serv., (FWF-3), undated. 3 pages. Free copies are available from Agricultural Extension Service, University of Tennessee Institute of Agriculture, P.O. Box 1071, Knoxville, Tenn. 37901.

Liming Farm Fish Ponds in East Texas, by Joe Lock and J. Davis. College Sta., Tex., Agr. Ext. Serv., L-1864, June 1981. 2 pages. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Details the chemical analysis and methods used to correct low pH.

Liming Fish Ponds, by John Jensen. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-232, Feb. 1981. 2-page fisheries fact sheet. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

When and how ponds should be limed, how to check for lime requirements, and types and application of lime materials.

Oxygen Depletion in Ponds, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., Leaflet No. 233, Univ. of Ga., Dec. 1978. 6-page leaflet. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Pond Fertilization and Liming, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., Bulletin 867, Univ. of Ga., March 1982. 15 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Pond Management: Oxygen in Fish Culture Ponds, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., L-1778, Feb. 1981. 12 pages. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Provides information about the effects of climatic and weather factors on oxygen content of pond water and presents management tools.

Predicting Nighttime Oxygen Depletion in Catfish Ponds, by R. P. Romaine and C. E. Boyd. Auburn Univ., Agr. Exp. Sta., Bulletin 505, Sept. 1978. 32 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Sample Size for Water Quality Measurements in Fish Ponds, by C. E. Boyd and J. C. Williams. Auburn Univ., Agr. Exp. Sta., Leaflet No. 100, Feb. 1981. 6 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Stocking and Management Recommendations for Texas Farm Ponds, prepared by members of the Tex. Chapter of the Am. Fisheries Soc., College Sta., Tex., Agr. Ext. Service, B-1442, June 1983. 11 pages. Free copies are available from Extension, Fisheries and Wildlife, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Information on stocking recommendations and management techniques for various species in Texas.

Table for Computing Relative Conditions of Some Common Freshwater Fishes, by W. E. Swingle and E. W. Shell. Auburn Univ., Agr. Exp. Sta., Circular 183, Feb. 1971. 55 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

The Use of Ozone in Fish Culture: A Brief Review, by A. R. Anderson. Longview, Wash., U.S. Fish and Wildlife Serv., Abernathy Salmon Cult. Dev. Ctr., Technology Transfer Series No. 82-1, Nov. 1982. 32 pages. Free copies are available from Abernathy Salmon Cultural Development Center, 1440 Abernathy Road, Longview, Wash. 98632.

Reviews technical aspects, current application, and explores further use potential.

Using Chemicals in Pond Management, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., Bulletin 866, Univ. of Ga., April 1982. 21 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Information about controlling weeds, fish diseases, insect and aquatic invertebrates, eliminating undesirable invertebrates, eliminating undesirable fish, and correction of water quality problems.

Water Chemistry of Alabama Ponds, by R. G. Arce and C. E. Boyd. Auburn Univ., Agr. Exp. Sta., Bulletin 522, Oct. 1980. 35 pages. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Water Quality Management in Fish Ponds, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., County Agent's Fisheries Update No. 2, College of Agr., Sept. 1981. 25 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602. Suppl. 1 of 4 pages entitled *Pond Water Analysis Reports* was issued March 1983.

Describes chemical and physical factors that affect water quality.

Water Quality in Warmwater Fish Ponds, by C. E. Boyd. Auburn Univ., Agr. Exp. Sta., 1979. 359 pages. Available at \$4.75 from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Ala. 36849.

Ponds— Aquatic Vegetation Control

Common Aquatic Plants of Texas: Identification and Control, by Wallace G. Klussman, F. G. Lowman, and J. T. Davis. College Sta., Tex., Agr. Ext. Serv., B-1-18, undated. 16 pages, illustrated. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Discusses identification and control methods for common weed problems in Texas.

Identification and Control of Weeds in Southern Ponds, by George W. Lewis and J. F. Miller. Athens, Ga., Coop. Ext. Serv., Bulletin No. 839, Univ. of Ga., Nov. 1980. 27 pages with color illustrations. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Discusses prevention methods and mechanical, biological, and chemical control measures.

Weed Control in Lakes and Farm Ponds, by Ted Whitwell and D. R. Bayne. Auburn Univ., Ala. Coop. Ext. Serv., Circular ANR-48, undated. 6 pages. Free copies are available from Alabama Cooperative Extension Service, Auburn University, Auburn, Ala. 36849.

Describes manual, mechanical, chemical and biological control measures and techniques.

Salmon

Artificial Salmon Spawning: A Manual, by William W. Smoker and C. L. Kerns. Fairbanks, Alaska, Univ. of Alaska, Sea Grant Marine Advisory Bulletin No. 7, undated, but due to be revised and reissued in 1984. 21 pages, illustrated. Single copies \$2.00. For copies write to Alaska Sea Grant College Program, Suite 102, 590 University Ave., Fairbanks, Alaska 99701.

The Effect of Improved Rearing Conditions on the Adult Survival of Fall Chinook Salmon, by L. G. Fowler, R. E. Burrows, B. D. Combs, and A. E. Thomas. Longview, Wash., U.S. Fish and Wildlife Serv., Abernathy Salmon Cult. Dev. Ctr., Technology Transfer Series No. 80-2, May 1980. 12 pages. Free copies are available from Abernathy Salmon Cultural Development Center, 1440 Abernathy Road, Longview, Wash. 98632.

Provides information about survival of salmon reared in different water supply systems.

The Effects of Population Weight Loads and Crowding on Fall Chinook Fingerlings Reared in Circular Tanks, by J. L. Banks and L. G. Fowler. Longview, Wash., U.S. Fish and Wildlife Serv., Abernathy Salmon Cult. Dev. Ctr., Technology Transfer Series No. 82-3, Nov. 1982. 12 pages. Free copies are available from Abernathy Salmon Cultural Development Center, 1440 Abernathy Road, Longview, Wash. 98632.

Discusses the effect of stocking densities at various feeding levels on fish health and growth.

Salmonid Broodstock Maturation: Proceedings of Workshops held at Seattle, Washington, Mar. 20-22, 1980 and March 11, 1981, edited by Terry Noshov. Seattle, Wash., Univ. of Wash., Sea Grant Program, (WSG-WO 80-1), May 1981. 92 pages. \$3.00. For copies write to Washington Sea Grant Communications HG-30, 3716 Brooklyn Ave., N.E., Seattle, Wash. 98105.

Includes state-of-the-art information on broodstock maturation, adult survival and maturation, gamete viability, and research priorities.

1981 Tests with Poultry By-Product Meal in Fall Chinook Salmon Diets, by L. G. Fowler. Longview, Wash., U.S. Fish and Wildlife Serv., Abernathy Salmon Cult. Dev. Ctr., Technology Transfer Series No. 82-1, Nov. 1982. Free copies are available from Abernathy Salmon Cultural Development Center, 1440 Abernathy Road, Longview, Wash. 98632.

Shrimp and Prawns

Costs and Returns for Macrobrachium Grow-out in South Carolina, by K. J. Roberts and L. L. Bauer. Charleston, S.C., S.C. Sea Grant Consortium, (SC-SG-TR-78-09), 1978. 14 pages. Free to State residents, \$1.00 to others. For copies write to Communications, South Carolina Sea Grant Consortium, 221 Fort Johnson Road, Charleston, S.C. 29412.

Presents technical coefficients and yields based on experimental pond research.

Farming Freshwater Shrimp, by Robert W. Brick and J. T. Davis. College Sta., Tex., Agr. Ext. Serv., L-1849, May 1981. 4 pages. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Outlines pitfalls and problems facing prospective prawn culturists in Texas.

Field Application of Several Management Chemicals in Shrimp Rearing Ponds, by S. K. Johnson and H. W. Holcomb. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab., (FDDL-S5), Jan. 1975. 3 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Results of tests using potassium permanganate, copper sulfate, and malachite green in shrimp ponds.

Handbook of Shrimp Diseases, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv. and the Sea Grant College Program, TAMU-SG-75-603, March 1978. 23 pages. Single copies free, \$2.00 each for more than one copy. Write to S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Information source and field guide for identification of diseases.

Shrimp Mariculture, by Addison L. Lawrence, G. W. Chamberlain, and D. L. Hutchins. College Sta., Tex., Sea Grant College Program, TAMU-SG-82-503, Dec. 1981. 9 pages with lit. reference list. Free copies are available from Sea Grant College Program, Texas A&M University, College Station, Tex. 77843.

Presents obstacles to viable culture and includes discussions of current and future potential.

Shrimp Mariculture (State of the Art), by Addison L. Lawrence, M. A. Johns, and W. L. Griffin. College Sta., Tex., Sea Grant College Program, TAMU-SG-84-502, Oct. 1983. 12 pages with lit. reference list. Free copies are available from Sea Grant College Program, Texas A&M University, College Station, Tex. 77843.

Covers major aspects of shrimp fishery and shrimp aquaculture in Texas and elsewhere in the world. Considers technology, site selection, legal constraints, and permitting.

Toxicity of Several Management Chemicals to Penaeid Shrimp, by S. K. Johnson. College Sta., Tex., Agr. Ext. Serv., Fish Disease Diagnostic Lab., (FDDL-S3), Nov. 1974. 12 pages. Free copies are available from S. K. Johnson, Dept. of Wildlife and Fisheries Sciences, Room 102, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Reports on toxicity of seven chemicals including recommendations for each.

Sportfish

Common Freshwater Sport Fishes of the Southeast, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., MP No. 145, Univ. of Ga., March 1983. 56 pages with color illustrations. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Fish; Identification of Game and Food Fishes Found in Arkansas, by D. Leroy Gray. Little Rock, Ark., Coop. Ext. Serv., Univ. of Ark., Div. of Agr., Extension Circular No. 500, Dec. 1979. 28 pages with drawings. Free copies are available from Cooperative Extension Service, University of Arkansas, Little Rock, Ark. 72203.

Includes information on spawning habits, food habits, and baits.

Largemouth Bass, by Donny W. Steinbach and R. Noble. College Sta., Tex., Agr. Ext. Serv., L-2803, July 1983. 2-page fact sheet. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Describes culture and management of bass in ponds or lakes.

Management of Georgia Sportfishing Ponds, by George W. Lewis. Athens, Ga., Coop. Ext. Serv., Bulletin 732, Univ. of Ga., Sept. 1983. 23 pages, illustrated. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Threadfin Shad Management and Culture, by Billy Higginbotham. College Sta., Tex., Agr. Ext. Serv., L-2085, June 1983. 2-page fact sheet. Free copies are available from Extension, Wildlife and Fisheries, Room 110, Nagle Hall, Texas A&M University, College Station, Tex. 77843.

Discusses problems associated with shad culture as a forage base.

Trout

Establishing a Trout-Marketing Cooperative, by James L. Goff, R. W. Dutrow, and R. Williams. U.S. Dept. of Agriculture, Wash., D.C., ESCS Farmer Cooperative Research Report No. 12, Aug. 1979. 40 pages. Free copies are available from Publications, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

Explores marketing potential and best methodologies, and establishment of a processing plant.

N.C. Trout Production: Investment and Operating Cost Estimates for a Trout Production Enterprise, by J. E. Easley, Jr. Raleigh, N.C., N.C. St. Univ., N.C. Agr. Ext. Serv., (AG-299), Dec. 1982. 14 pages, illustrated. Free copies are available from Publications Office, N.C. Agricultural Extension Service, North Carolina State University, Raleigh, N.C. 27650.

Trout Farming: Could Trout Farming be Profitable for You?, by Paul M. Scheffer and L. D. Marriage. U.S. Dept. of Agriculture, Wash., D.C., Leaflet 552, Nov. 1969. 8 pages. Free copies are available from county or state Soil Conservation Service offices, or Publications Office, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C. 20250.

Trout Farming in Georgia, Athens, Ga., Agr. Ext. Serv., County Agent's Fisheries Update No. 4, Feb. 1983. 7 pages. Free copies are available from College of Agriculture, University of Georgia, Athens, Ga. 30602.

Trout Feed Formulation Specification, Spearfish, S. D., U.S. Fish and Wildlife Serv., Diet Test. Dev. Ctr., July 1977. 11 mimeographed pages. Free copies are available from Spearfish Fisheries Center and Diet Testing Development Unit, P.O. Box 158, Spearfish, S. D. 57783.

Trout Ponds for Recreation, by L. Dean Marriage, A. E. Borell, and P. M. Scheffer. U.S. Dept. of Agriculture, Wash., D.C., Farmer's Bulletin No. 2249, Nov. 1971. 13 pages. Free copies are available from county or state Soil Conservation Service offices, or Publications Office, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C. 20250.

Whirling Disease of Trout, by G. L. Hoffman. Stuttgart, Ark., U.S. Fish and Wildlife Serv., Fish Farming Exp. Station, Fish Disease Leaflet 47, Nov. 1976. 10 pages. Free copies are available from Technical Information Service, National Fisheries Center, Box 700, Kearneysville, W. Va. 25430.

“How-To” Periodicals and Newsletters

Articles appearing in periodicals, trade journals, or newsletters are excluded from this bibliography. It is important that the reader realize that these sources are also valuable. For the serious aquaculturist, access to, and reading some of these application and information publications may be essential.

State Cooperative Extension Service Newsletters

A few newsletters appear which will be of interest to aquaculturists looking for application information beyond the boundaries of the state for which they were prepared. This brief list covers those newsletters devoted entirely to aquaculture activities.

Aquaculture Update is a quarterly newsletter beginning in 1984 with a target of 35 pages a year to be issued. Its coverage will be aimed at aquaculture practitioners in Louisiana with emphasis on alligators, catfish and crawfish. The newsletter will include practical management tips, marketing information, notes on weather influences, as well as news announcements. Free copies are available from Larry de la Bretonne, Aquaculture Extension Specialist, 202A Knapp Hall, Louisiana State University, Baton Rouge, Louisiana 70803

California Aquaculture is a bimonthly newsletter for aquaculture farmers and processors. Approximately 30 pages are issued a year which include practical and technical farming tips and notes on meetings, legislation, and workshops. Free copies are available from Dr. Fred Conte, Aquaculture Extension, 254 Hart Hall, University of California, Davis, California 95616

For Fish Farmers is issued by the Cooperative Extension Service at Mississippi State University. This photoreproduced newsletter is issued irregularly (5 issued in 1983, totaling 39 pages). It includes such information as the fish farm acreage in Mississippi, catfish biology articles, disease prevention and control, evaluation notices on equipment, and similar practical matters. For information contact Dr. Thomas L. Wellborn, Jr., Extension Wildlife and Fisheries, Mississippi Cooperative Extension Service, Mississippi State University, Mississippi State, Mississippi 39762

Net Gains is an informal newsletter from Auburn University for Alabama aquaculture farmers and processors. It reports practical and technical farming suggestions, announcements on new findings and applications, meeting, and workshops. Free copies are available from Dr. John Jensen, Alabama Cooperative Extension Service, Swingle Hall, Auburn University, Auburn, Alabama 36849

Southeast Texas Crawfish Newsletter is irregularly issued, but usually four times a year (8 pages total in 1983). This is an informal, practical, and technical guide for farmers and processors. Free copies are available from Don Kachstik, Cooperative Extension Service, P.O. Box 1456, Orange, Texas 77630

Major Trade Journals for Practitioners

Aquaculture Magazine, P.O. Box 2329, Asheville, N.C. 28802. (Bimonthly, \$15 a year.) Vol. 9 (1983) about 300 pages. Includes news and feature articles for those engaged in production, processing, and marketing of finfish, shellfish, crustaceans, and aquatic plants. Includes reports on educational courses, extension activities, annual meeting summaries of State associations, new equipment and supplies, publications, and a good calendar of future activities. Its annual *Buyer's Guide* is excellent.

Farm Pond Harvest, Professional Sportsmans Publishing Co., Box AA, Momence, Ill. 60954. (Issued in January, April, July, and October; \$8 a year.) Vol. 17 (1983) about 150 pages. Concerned with farm pond planning, construction, management, and fishing and harvesting. Very newsy and informal. Includes much industry advertising.

Fisheries: A Bulletin of the American Fisheries Society, The American Fisheries Society, 5410 Grosvenor Lane, Bethesda, Md. 20814. (Bimonthly, \$30 per year.) About 280 pages. The Society newsletter and professional journal of the largest fisheries group in the United States. Includes some papers on fisheries management, but its prime value is announcements of recent developments, news and notes of the Society, good list of coming meetings, and new books and literature. Contains ads of interest to professional fish biologists.

Progressive Fish-Culturist, The American Fisheries Society, 5410 Grosvenor Lane, Bethesda, Md. 20814. (Quarterly, \$12.50 a year.) Vol. 45 (1983) about 230 pages. Primarily concerned with native field fish—their health, propagation, equipment, and general care. In recent years more emphasis has been placed on their culture in reservoirs, impoundments, lakes, and associated environmental situations. A practical scientific journal for advanced culturists.

Salmonid: The Official Journal of the United States Trout Farmers Association, P.O. Box 171, Lake Ozark, Mo. 65049. (Bimonthly, \$17.50 a year.) Vol. 7 (1983) about 145 pages. Includes news columns and feature articles for those specializing in trout production, processing, and marketing. News items cover courses, conference announcements and reports, biographical reports, and highlights of research or activities pertinent to Salmonidae.

**Another Valuable
Resource**

Proceedings of the Fish Farming Conference and Annual Convention of Fish Farmers of Texas. In recent years, the conference has been organized by the Texas Agricultural Extension Service and the Department of Wildlife and Fisheries Sciences, College of Agriculture, Texas A&M University. The 1983 *Proceedings* includes 107 pages of valuable, practical, and up-to-date aquaculture information for Texas and the Southwest. The 10 papers in the 1983 issue covered culture techniques of forage species, culture of redfish and trout at a hatchery, field evaluation of a pond aeration system, status of the Texas aquaculture industry, legal aspects of aquaculture, filamentous algae control, using Tilapia in livestock watering tanks, guidelines for selecting feeds and techniques, and feeding young channel catfish. Some subjects are updated annually or extended with new knowledge and experience. The proceedings should be very valuable for aquaculturists dealing with similar problems or questions.

Related Bibliographies

Five valuable and related bibliographies exist which may be of interest. They are either much more extensive, more specific in scope, or intended for a different audience than this publication.

1. *A Bibliography of Cooperative Extension Service Literature on Wildlife, Fish, and Forest Resources*, compiled by Robert L. Ruff. Published by the Dept. of Wildlife Ecology, Coop. Ext. Programs, University of Wisconsin, Madison, Wisconsin 53706, April 1982. 42 pages.

This excellent listing is currently out of print but should be available at land-grant university libraries. Its aim is much like this publication's, but covers many more subjects. The 105 aquaculture and fish citations are broader in scope, also. A new edition is under consideration for 1985.

2. Auburn Univ., Alabama Agricultural Experiment Station, Dept. of Fisheries and Allied Aquacultures, and International Center for Aquaculture. *Publications List 105*, latest issue Sept. 1983. 37 pages with about 400 publications listed. Free copies are available from Publications, Dept. of Fisheries and Allied Aquacultures, Swingle Hall, Auburn University, Auburn, Alabama 36849.

This extensive listing of free material includes reprints, bulletins, workshop papers, and four books which are for sale. Includes popular and scientific literature, some Spanish language publications, and reports of international consultations. A valuable list which is updated regularly.

3. *Fish Culture: An Annotated Bibliography of Publications of the National Fisheries Center—Leetown, 1972-1980*, by Joyce A. Mann, V. J. Catrow, L. C. McKenzie, and F. V. Engle. Kearneysville, W. Va., U.S. Fish and Wildlife Service, National Fisheries Center—Leetown, (FWS/NFC-L/82-1), August 1982. 124 pages. Free copies are available from Technical Information Service, National Fisheries Center, Box 700, Kearneysville, West Virginia 25430.

This is a bibliography primarily of the scientific and technical writings of the staff of the National Fisheries Center which appeared in journals, conference proceedings, and books. Although mostly scientific, it is a major compilation which could be useful to some extension and technology transfer agents. It includes citations to the writings of the U.S. Fish and Wildlife Service personnel at six research laboratories around the United States, as well as the National Fisheries Center.

4. *Literature for United States Aquaculture: 1970-1982*, by John B. Forbes and C. N. Bebee. U.S. Dept. of Agriculture, Beltsville, Md., National Agricultural Library, Bibliographies and Literature of Agriculture No. 28, Oct. 1983. 3600 citations. 288 pages. Free copies are available from National Agricultural Library, Room 203, Beltsville, Maryland 20705.

This immense bibliography includes little application literature, but is an extensive compilation of the journal and book literature from around the world chosen for its possible application to U.S. aquaculture. Copies were sent to land-grant university libraries where they may also be consulted.

5. *Aquaculture and Related Publications of the School of Forestry and Wildlife Management*, Agricultural Experimental Station, Louisiana State University, Baton Rouge, Louisiana, Jan. 1983. 27 pages. Free copies are available from Publications Clerk, 249 Ag Center, Louisiana State University, Baton Rouge, Louisiana 70803.

Almost 300 listings under such headings as crawfish culture and biology, catfish farming, amphibians, mariculture, waste management, genetics and breeding, water quality, and management. An important reference resource for the serious or potential aquaculturist. Scientific papers, proceedings of workshops, symposia, and other conferences, including Proceedings of the World Mariculture Society are covered.

Cooperative Extension and Marine Advisory Contacts

Alabama

John Jensen, Fisheries
Specialized
Alabama CES, Swingle Hall
Auburn University,
Auburn, AL 36849
(205) 826-4786

Richard K. Wallace, Program
Associate-Commercial Fishing
3940 Government Boulevard
Mobile, AL 36609
(205) 661-5004

Steven Brown,
Area Specialist Agent
Aquaculture
Alabama CES
P.O. Box 487
Greensboro, AL 36751
(205) 624-3651

Alaska

D. Douglas Coughenower
Assistant Professor, Fisheries
Marine Advisory Program
P.O. Box 10048
Dillingham, AK 99576
(907) 842-1265

Craig S. Wiese
Business Specialist
2221 E. Northern Lights
Suite 104
Anchorage, AK 99508
(907) 274-9691

Brian C. Paust
Marine Advisory Service Agent
P.O. Box 1329
Petersburg, AK 99833
(907) 772-3381

Arizona

John Stair, Extension
Specialist
Wildlife/Range
University of Arizona CES
4201 E. Broadway
Phoenix, AZ 85040
(602) 255-5080

Arkansas

D. Leroy Gray
Extension Fish and Wildlife
Biologist
Cooperative Extension Service
P.O. Box 391
Little Rock, AR 72203
(501) 373-2637

Larry W. Dorman
Extension Assist. Fisheries
Specialist
Lonoke Agriculture Center
Drawer D
Lonoke, AR 72086
(501) 373-2637

Gary Burtle
Ext. Fisheries Specialist
University of Arkansas,
Pine Bluff, P.O. Box 4007
Pine Bluff, AR 71601
(501) 541-6873

California

Fred S. Conte, Aquaculture
Aquaculture Extension Specialist
University of California
Davis, CA 95616
(916) 752-7490

Christopher M. Dewees
Marine Fisheries Specialist
Sea Grant M.A.P. Extension
University of California
Davis, CA 95616
(916) 752-1479

Colorado

Delwin E. Benson
Extension Wildlife Specialist
Dept. of Fishery and Wildlife
Biology
109 Wagar Bldg.
Colorado State University
Ft. Collins, CO 80523
(303) 491-6411

Connecticut

Lance L. Stewart
Program Leader
Sea Grant Extension Program
University of Connecticut
Avery Point
Groton, CT 06340
(203) 445-8664

John H. Volk
Division Chief
State of Connecticut,
Dept. of Agriculture-
Aquaculture Div.
P.O. Box 97
Milford, CT 06460
(203) 874-0696

Delaware

Samuel Gwinn
Director of Extension Service
Cooperative Extension Service
University of Delaware
Newark, DE 19711
(302) 738-2504

Andrew T. Manus
Executive Director and
Director for Sea Grant, MAS
University of Delaware Sea Grant
College Program
700 Pilottown Road
Lewes, DE 19958
(302) 645-4346

District of Columbia

Alfred Wilkins
State Program Leader
Agriculture and Natural
Resources
Cooperative Extension Service
4200 Conn. Avenue, N.W.
Washington, D.C. 20008
(202) 767-8471

Florida

Marion L. Clarke
Coordinator
Marine Advisory Program
Newins-Ziegler Hall
University of Florida
Gainesville, FL 32611
(904) 392-1837

Georgia

George Lewis
Head, Extension Aqua. and Fish.
Department
Coopertive Extension Service
Room 209, Barrows Hall
University of Georgia
Athens, GA 30602
(404) 542-1924

Ronnie J. Gilbert
Fisheries Specialist
School of Forest Resources
University of Georgia
Athens, GA 30602
(404) 542-5260

Guam

David P. Crisostomo
Extension Aquaculture Agent
College of Agricultural and Life
Sciences
University of Guam Station
Mangilao, GU 96913
(671) 734-2421, Ext. 359

Barry D. Smith
Sea Grant Extension Agent
University of Guam Marine Lab
Mangilao, GU 96913
(671) 734-2421, Ext. 359

Hawaii

Yukio Kitagawa
Assistant Director
Extension Service
University of Hawaii
Honolulu, HI 96822
(808) 948-8397

Richard E. Brock
Fisheries Specialist
Sea Grant Extension Service
1000 Pope Road
Honolulu, HI 96822
(808) 948-8191

Edwin Bartholomew
Sea Grant Extension-County Agent
310 Kaahumaru Avenue
Kahului, HI 96732
(808) 244-4157

Idaho

George W. Klontz
Fish and Wildlife Research
University of Idaho
Moscow, ID 83843
(208) 885-6434

Ernest D. Abies
Fish and Wildlife Department
College FWR Building
University of Idaho
Moscow, ID 83843
(208) 885-6435

Illinois

Robert D. Espeseth
Coordinator Program
University of Illinois
1206 South 4th Street
Champaign, IL 61820
(217) 333-1824

Indiana

Herbert C. Krauch
Extension Wildlife Specialist
Illinois-Indiana Sea Grant
Dept. of Forestry and Natural
Resources
Purdue University
W. Lafayette, IN 47907
(317) 494-3586

Robert M. Ritchie
Extension Specialist, 4-H/Youth
AGAD Building
Purdue University
W. Lafayette, IN 47907
(317) 494-8439

Iowa

R. B. Moorman
Extension Wildlife
Conservationist
Department of Animal Ecology
Iowa State University
Ames, IA 50011
(515) 294-7429

Kansas

F. Robert Henderson
State Program Leader
Wildlife Damage Control
Umberger Hall
Manhattan, KS 66506
(913) 532-5785

Kentucky

Gary Jensen
Extension Aquaculture Specialist
Cooperative Extension Program
P.O. Box 196
Kentucky State University
Frankfort, KY 40601
(502) 564-6152

Louisiana

Larry de la Bretonne
Extension Assistant, Aquaculture
202-A Knapp Hall
Louisiana State University
Baton Rouge, LA 70803
(504) 388-4569

Kenneth J. Roberts
Specialist
Marine Resource Economics
Knapp Hall
Louisiana State University
Baton Rouge, LA 70803
(504) 388-2145

Michael Moody
Associate Specialist
Seafood Technology
202-C Knapp Hall
Louisiana State University
Baton Rouge, LA 70803
(504) 388-2180

Maine

Bud Blumenstock
Extension Forester, CES
Nutting Hall
University of Maine
Orono, ME 04469
(207) 581-2892

Maryland

Tony Mazzaccaro
Assistant Director
Marine Advisory Program
Maryland CES
University of Maryland
Symons Hall
College Park, MD 20742
(301) 454-4190

John N. Hochheimer
Extension Specialist/Agriculture
Engin.
University of Maryland H.P.E.L.
P.O. Box 775
Cambridge, MD 21613
(301) 228-8200, Ext. 274

Donald Meritt
Extension Aquaculture Specialist
Maryland CES
Horn Point Laboratory
P.O. Box 775
Cambridge, MD 21613
(301) 228-8200

Massachusetts

Not Available

Michigan

Donald L. Garling
Aquaculture and Fisheries
Specialist
Fisheries and Wildlife
Department
Natural Resources Building
Michigan State University
East Lansing, MI 48824
(517) 355-7493

Daniel Talhelm
Fisheries and Wildlife Economics
Specialist
Fisheries and Wildlife
Department
Natural Resources Building
Michigan State University
East Lansing, MI 48824
(517) 355-7493

Minnesota

Jeffrey Gunderson
Area Extension Agent-Fisheries
208 Washburn Hall
University of Minnesota
Duluth, MN 55812
(218) 726-8106

Anne R. Kapuscinski
Sea Grant Specialist in
Aquaculture
Dept. of Fish and Wildlife
University of Minnesota
200 Hodson Hall, 1980 Folwell
St. Paul, MN 55108
(612) 376-9921

Mississippi

Thomas L. Wellborn
Leader Extension
Wildlife and Fisheries
P.O. Box 5405
Mississippi State, MS 39762
(601) 325-3174

Robert M. Durborow
Extension Fisheries Specialist
P.O. Box 142
Stoneville, MS 38776
(601) 686-9311

J. R. (Randy) MacMillan
Extension Area Fisheries
Specialist
Delta Branch Experiment Station
Stoneville, MS 38776
(601) 686-9311

Missouri

Joe G. Dillard
Extension Fisheries Specialist
School of Forestry, Fisheries and
Wildlife
Room 1-31, Agriculture Bldg.
University of Missouri-Columbia
Columbia, MO 65211
(314) 882-4337

Montana

Gary Jensen
Extension Entomologist
Lewis Hall
Montana State University
Bozeman, MT 59717
(406) 994-2440

Nebraska

Ron. J. Johnson
Extension Wildlife Specialist
Department of Forestry,
Fisheries and Wildlife
202 Natural Resources Hall
University of Nebraska
Lincoln, NE 68583
(402) 472-6823

Nevada

Donald A. Klebenow
Dept. of Range, Wildlife and
Forestry
University of Reno-Nevada
Renewable Resource Center
1000 Valley Road
Reno, NV 89512
(702) 784-4616

New Hampshire

Stanley W. Knowles
Associate Program Leader
Room 110-C, Pettee Hall
University of New Hampshire
Durham, NH 03824
(603) 862-1029

New Jersey

C. B. Grimes
Dept. of Horticulture and Forestry
Cooke College, Rutgers University
New Brunswick, NJ 08903
(201) 932-9333

Stewart M. Tweed
Marine Extension Agent
Cape May County Extension
Office
Dennisville Road, Route #657
Cape May Courthouse, NJ 08210
(609) 465-5115

Gef Flimlin
Marine Extension Agent
Ocean County Ag Building
Whitesville Road
Toms River, NJ 08753
(201) 349-1152

New Mexico

James E. Knight
Extension Wildlife Specialist
Fisheries Management
Box 4901
New Mexico State University
Las Cruces, NM 88001
(505) 646-1164

New York

John W. Kelley
Dept. Extension Leader
Department of Natural Resources
Cornell University
Ithaca, NY 14853
(607) 256-2114

Bruce Wilkins
Professor
Cornell University
Fernow Hall
Ithaca, NY 14853
(607) 256-2162

Michael W. Duttweiler
Program Coordinator, CES
Department of Natural Resources
Fernow Hall
Cornell University
Ithaca, NY 14853
(607) 256-2162

North Carolina

David J. DeMont
Extension Fisheries Specialist
North Carolina State University
P.O. Box 5577
Raleigh, NC 27650
(919) 737-2741

Randy Rouse
Sea Grant Aquaculture R&D
Center
Route 2, Box 305
Aurora, NC 27806
(919) 322-4054

Jim Murray
Director
Marine Advisory Services
UNC Sea Grant Program
P.O. Box 8605
North Carolina State University
Raleigh, NC 27695
(919) 737-2454

North Dakota

Eric Bakke
Extension Wildlife Specialist,
CES
Stevens Hall
Fargo, ND 58105
(701) 237-7950

Ohio

Thomas M. Stockdale
Extension Wildlife Specialist
375-C Kottman Hall
2021 Coffey Road
The Ohio State University
Columbus, OH 43210
(614) 422-1981

Jeffrey M. Reuter
Associate Director
Ohio Sea Grant
484 W. 12th Avenue
Columbus, OH 43210
(614) 422-8949

Oklahoma

R. W. (Bill) Altman
Wildlife Specialist (CES)
017 Agricultural Hall
Oklahoma State University
Stillwater, OK 74704
(405) 624-5515

Oregon

Richard A. Tubb
Department of Fisheries and
Wildlife
Nash Hall, 104-C
Oregon State University
Corvallis, OR 97331
(503) 754-4531

John Faudskar
Extension Marine Agent
Tillamook Extension Office
2204 4th Street
Tillamook, OR 97141
(503) 842-5511, Ext. 372

William Q. Wick
Director
Sea Grant College Program
Oregon State University
Adm. Services Building,
Room 320
Corvallis, OR 97331
(503) 754-2714

Pennsylvania

Terry Rader
Forest Resources
109 Ferguson Building
Pennsylvania State University
University Park, PA 16802
(814) 863-0401

Puerto Rico

Israel A. Cordero Vega
Assistant Director
Agricultural, Marketing &
Natural Resources Program
Agricultural Extension Service
University of Puerto Rico
College Station
Mayaguez, PR 00708
(809) 833-7000, Ext. 229

Alejandro Ayala
Dean and Director
College of Agricultural Sciences
University of Puerto Rico
College Station
Mayaguez, PR 00708
(809) 832-4040, Ext. 2238

Rhode Island

Thomas P. Husband
Cooperative Extension Service
Dept. of Forestry and Wildlife
Management
University of Rhode Island
Kingston, RI 02881
(401) 792-2370

Chris Duerr
Marine Affairs Communicator
URI Marine Advisory Service
Narragansett, RI 02882
(401) 792-6211

South Carolina

D. L. Robinette
Extension Wildlife Specialist
Clemson University
Room 102, Long Hall
Clemson, SC 29631
(803) 656-3113

Thomas E. Schwedler
Extension Aquaculture Specialist
Clemson University
Long Hall
Clemson, SC 29631
(803) 656-3118

Tom Sweeney
Project Leader
Sea Grant Marine Extension
Program
221 Fort Johnson Road
James Island
Charleston, SC 29412
(803) 795-8462

Jack Whetstone
Marine Extension Specialist
P.O. Drawer 1100
Georgetown, SC 29442
(803) 546-4481

South Dakota

H. D. Hall
Director
Cooperative Extension Service
South Dakota State University
Brookings, SD 57006
(605) 688-4147

Charles G. Scalet
Professor and Head
Wildlife and Fisheries Sciences
Box 2206
Brookings, SD 57007
(605) 688-6121

Tennessee

Thomas K. Hill
Fisheries Extension
Dept. of Forestry,
Wildlife and Fisheries
University of Tennessee
Box 1071
Knoxville, TN 37901
(615) 974-7230

Texas

James T. Davis
Fisheries Specialist, CES
Nagle Hall, Room 102
Texas A&M University
College Station, TX 77843
(409) 845-7473

Don W. Steinbach
Fisheries Specialist, CES
Nagle Hall, Room 110
Texas A&M University
College Station, TX 77843
(409) 845-7471

Ranzell Nichelson
Seafood Technology Specialist,
CES
Kleberg Center, Room 442
Texas A&M University
College Station, TX 77843
(409) 845-3246

Joe Lock
Fisheries Specialist
Box 38
Overton, TX 75684
(214) 834-6191

George W. Chamberlain
Associate Aquaculture Specialist
Route 2, Box 589
Corpus Christi, TX 78410
(512) 265-9203

Gary Graham
Associate Marine Fisheries
Specialist
Route 2, Armory
Angleton, TX 77515
(409) 849-5711, Ext. 1564

Billy Higginbotham
Extension Fisheries Specialist
P.O. Box 38
Overton, TX 75684
(214) 834-6191

Granvil D. Treece
Interim Sup.
Marine Advisory Service
442 Kleberg Center
Texas A&M University
College Station, TX 77843
(409) 845-8557

Utah

Gar W. Workman
Dept. of Fisheries and Wildlife
UMC 52
Utah State University
Logan, UT 84322
(801) 750-2461

Vermont

Linda A. Marek
Extension Water Resources
Specialist
University of Vermont
Aiken Center
Burlington, VT 05405
(802) 656-3258

Virginia

Louis A. Helfrich
Extension Specialist, Fisheries
Cooperative Extension Service
152 Cheatham Hall
Virginia Polytechnic Institute
and State University
Blacksburg, VA 24061
(703) 961-5059

Michael J. Oesterling
Commercial Fisheries Specialist
Marine Advisory Services
Va. Institute of Marine Science
Gloucester Point, VA 23062
(804) 642-7165

Virgin Islands

Walter I. Knausenberger
Natural Resources Liaison
Program
Virgin Islands Extension Service
College of the Virgin Islands
P.O. Box L, Kingshill
St. Croix, VI 00850
(809) 778-0246

Washington

Steve C. Harbell
Area Marine Resources
Extension Agent
Courthouse, Box 552
Montesano, WA 98563
(206) 249-4332

Terry Y. Noshov
Aquaculture Specialist
Washington Sea Grant Program
HG-30
University of Washington
Seattle, WA 98105
(206) 543-6600

Michael S. Spranger
Marine Resources Specialist
1918 N.E. 78th Street
Vancouver, WA 98665
(206) 696-6737

West Virginia

Not Available

Wisconsin

Robert L. Ruff
Extension Wildlife Specialist
Department of Wildlife Ecology
226 Russell Labs.
University of Wisconsin
Madison, WI 53706
(608) 263-2071

Lynn Frederick
Sea Grant Advisory Service
The Walkway—522 Bay Shore Dr.
Sister Bay, WI 54232
(414) 854-5329

Wyoming

J. Daniel Rodgers
Extension Range Management
Specialist
P.O. Box 3354
University Station
Laramie, WY 82071
(307) 766-5258

Fish and Wildlife Extension Coordinators and Cooperators

Duncan MacDonald
Office of Extension
and Publications
18th & C Streets, N.W.
Matomic Building, Room 543
Washington, D.C. 20240
(202) 653-8787

Joe McCraren
U.S. Fish and Wildlife Service
National Fisheries Center
Box 700
Kearneysville, WV 25430
(304) 725-8461

Mayo Martin
Fish Farming Experimental Station
U.S. Fish and Wildlife Service
Box 860
Stuttgart, AR 72160
(501) 673-8761

Harry Dupree
Director
Fish Farming Experimental Station
U.S. Fish and Wildlife Service
Box 860
Stuttgart, AR 72160
(501) 673-8761

